MINNESOTA NATURAL HERITAGE PROGRAM ELEMENT OCCURRENCE RECORD

Ename (below): Map Margin #: ___

_____ Occur #: ____

EO Rank: __
EO Acres: _____ EO Est.?: _
CBS Site #: ___

County: __ County Name: _____
LS Region: ___
DNR Code: ____ Quadname: _____
Township: _____ Range: ____ Section: _____ Location/Precision: _
Latitude: __ __ __ Longitude: __ __ __ Threat/Destruct: _

Sources(below):

_____

Collection #: _____ Voucher: _____ Verified: _ # of Releves: __
Last Observation: Month: __ Day: __ Year: ____

Macro Site: _____ Bioreserve Code: ___
Site Name: _____ Siteacres: _____ Est.?: _
Man1: _____
Man2: _____
Man3: _____ MoreMan?: _
Special Stat1-5:___ ___ ___ ___ ___ Current Status: __ Intended Status: __

# of Owners: __ Owncode: __ Owner: _____
Listed Colonial Waterbird Species?: _ Species/Site Monitoring?: _
General Description:

_____

_____

_____

_____

_____

_____

Transcriber: _____ Mapper: _____

MINNESOTA NATURAL HERITAGE PROGRAM RELEVE FORM

DNR, Natural Heritage & Non-game Wildlife Research Program, 500 Lafayette Road, Box 25, St. Paul, MN 55155

Map _____
Enter _____
QC _____
Edit _____
Append _____

DNR RELEVE# _____

---------- SITE DATA ----------

GENERAL INFORMATION

DNR Releve #: _ _ _ _ _ Surveyor's Releve#: _ _ _ _ _ _ _ _ _ EO Rec.#: _ _ _ _ _

*Surveyor's ID Code: _ _ _ _ (_____)

Institution: _____ Purpose of Releve: _____

Date: _ _ Month: _ _ _ Year: _ _ _ _ (e.g. 09 JUL 1998)

MCBS Site#: _ _ _ _ or Site Name: _____

Ownership: _ _ _ (_____)

*Native Plant Community Type: _ _ (_____)

*Native Plant Community Section: _ _ (_____)

*Native Plant Community Subtype: _ _ (_____)

Community Ranking in Releve: _ _

Stand Typical of Community Type: (Y)es if not, identify appropriate modifier:
(E)cotonal (N)atural disturbance (H)uman disturbance (1) stand < 40 yrs (O)ther _____

Releve Typical of Stand: (Y)es if not, identify appropriate modifier:
(E)cotonal (H)igher Quality (L)ower Quality (C)anopy Gap (O)ther _____

LOCATION INFORMATION

State Code: MN *County Code: _ _ (_____)

*Quad Code: DNR _ _ _ _ _ _ (_____)

Township: _ _ _ _ _ (e.g. 143N) Range: _ _ _ _ (e.g. 32W) GPS Time: _ _ : _ _ (am) (pm)

QQRT: _ _ QRT: _ _ of Section _ _

Latitude: _ _ ° _ _ ' _ _ "

Longitude: _ _ ° _ _ ' _ _ "

or UTM: _ _ _ _ _ _ _ _ N _ _ _ _ _ _ _ _ E

Permanent Marker: (Y)es (N)o _____

Forest Stand#: _ _ _ _ _ _

Accuracy: (S)caled from quad (F)orty
(U)ncorrected GPS (Q)uarter Section
(C)orrected GPS (N) Section
(E)stimated (T)ownship
(Z) unknown (Y) county

RELEVE INFORMATION

Releve Size: _ _ m. x _ _ m. = _ _ _ sq. m. Elev. _ _ _ _ ft.

Slope: _ _ (°) or _ _ (%) Aspect: _ _ (e.g. NW)

Slope Position: (C)rest (U)pper (M)iddle (L)ower (T)oe (D)epression (F)lat

Litter (L) Type: _____ Litter (L) Depth _ _ cm

Humus (H) Type: (Mull) lacking F+H layer; leaves decomposed in one season
(Moder) H: black, silty; partially incorporated into mineral soil
(Mor) H: brown ; fungal mat; not incorporated into mineral soil

Humus (F+H) Depth _ _ cm

A_h Horizon Depth (>) (_) _ _ _ cm

Soil1 Texture: _ _ _ _ (_____) Soil1 Depth (_) _ _ _ cm

Soil2 Texture: _ _ _ _ (_____) Soil2 Depth (_) _ _ _ cm

Cl=clay, Si=silt, Lo=loam, Sa=sand, Ro=rock, Mu=muck, Pe=peat, MP=moss peat, SP=sedge peat

Ave. Depth to Bedrock (_) _ _ _ cm.

Exposed Rock _ _ _ % Ave. Peat Depth (_) _ _ _ cm.

Rock Type: _____ Depth of Standing Water (_) _ _ _ cm.

Drainage Class: (E)xcessively (W)ell (M)oderately (S)omewhat Poorly (P)oorly (V)ery Poorly Drained

Context, Disturbance,

Remarks: _____

_____

_____

_____

*Variables with computerized code dictionaries (See Releve Handbook) (200 char.)

BASAL AREA					DIAMETERS
Species	L/D	1	2	Ave.	DBH (cm)

Notes:

1999 North Shore Plans
Minnesota County Biological Survey (MCBS)

In preparing for the survey of the North Shore subsection, MCBS identified twenty-five potential Landscape Study Areas (LSAs) North Shore subsection in the fall of 1998. Nine of these (☼ **in bold**) LSAs within each of three segments of the North Shore were selected as the focus of 1999 field work.

Some of the criteria used in selecting these LSAs are as follows:

- Area is representative of the Land Type Association (LTA) (displays the range of environmental gradients, complexes and connectivity of habitats in the LTA).
- Appears to contain high quality examples of high priority native plant communities.
- Contains concentrations of documented records of rare species or potential rare species habitat.
- Contains some character of the composition, association, natural disturbance patterns and spatial distribution of native habitats of the pre-European landscape.
- Contains elements of distinctive watershed and aquatic features identified in a parallel process.

Four MCBS botanist/plant ecologists are conducting surveys of the native plant communities and rare plants of these LSAs and the Lake Superior shoreline in 1999. Surveys of selected lakes with a focus on rare aquatic plant searches are underway in the St Louis County portion of the subsection.

1999 North Shore MCBS staff

Cook County: Chel Anderson (plant ecologist, Hovland) chel.anderson@dnr.state.mn.us (218) 475-0147
Lake County: Mike Lee (plant ecologist, Finland) michael.lee@dnr.state.mn.us (218)353-7619
St. Louis County: Carol Reschke (plant ecologist, Two Harbors) carol.reschke@dnr.state.mn.us (218) 834-6328.
Karen Myhre (Botanist) kmyhre@mlecmn.net (218) 927-3684

LSAs currently displayed on maps are only intended as a means of establishing survey priorities for MCBS and do not represent recommendations for specific management or conservation action.

Northern LSAs (Chel)	*Central LSAs (Mike)*	*Southern LSAs (Carol)*
Swamp River	**Manitou** ☼	Kettle Lake
Brule	Tettegouche	Knife
Grand Marais	**Splitgoose** ☼	Boulder Lake
Mississippi Creek	Marble	Fish Lake
Cascade	Highland	Lester-Amity
Sawtooth ☼	Cloquet River	Moose Mountain
Temperance ☼		**Points** ☼
		Estuary ☼
		Otter
		Perch ☼
		Hasty Brook ☼
		Magney Snively ☼

Please contact Carmen Converse, MCBS supervisor if you have comments about this plan or suggestions for additional areas to survey: carmen.converse@dnr.state.mn.us (651)-296-9782

5

Natural Resources of Minnesota Point:
Maps and Data in Support of the Minnesota Point Environmental Plan

Carol Johnston, Amy Trauger, Paul Meysembourg, John Bonde
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Duluth, MN

In cooperation with the Park Point Community Club
Kinnan Stauber, Project Manager

NRRI Technical Report NRRI/TR-99/11
November, 1999

Funding for this project approved by the Minnesota Legislature 1997 Minnesota Laws, Ch, 216, Sec. 15, Subd. 17(g) as recommended by the Legislative Commission on Minnesota Resources from the Minnesota Future Resources Fund.

click here to continue

Maps and Images of Minnesota Point

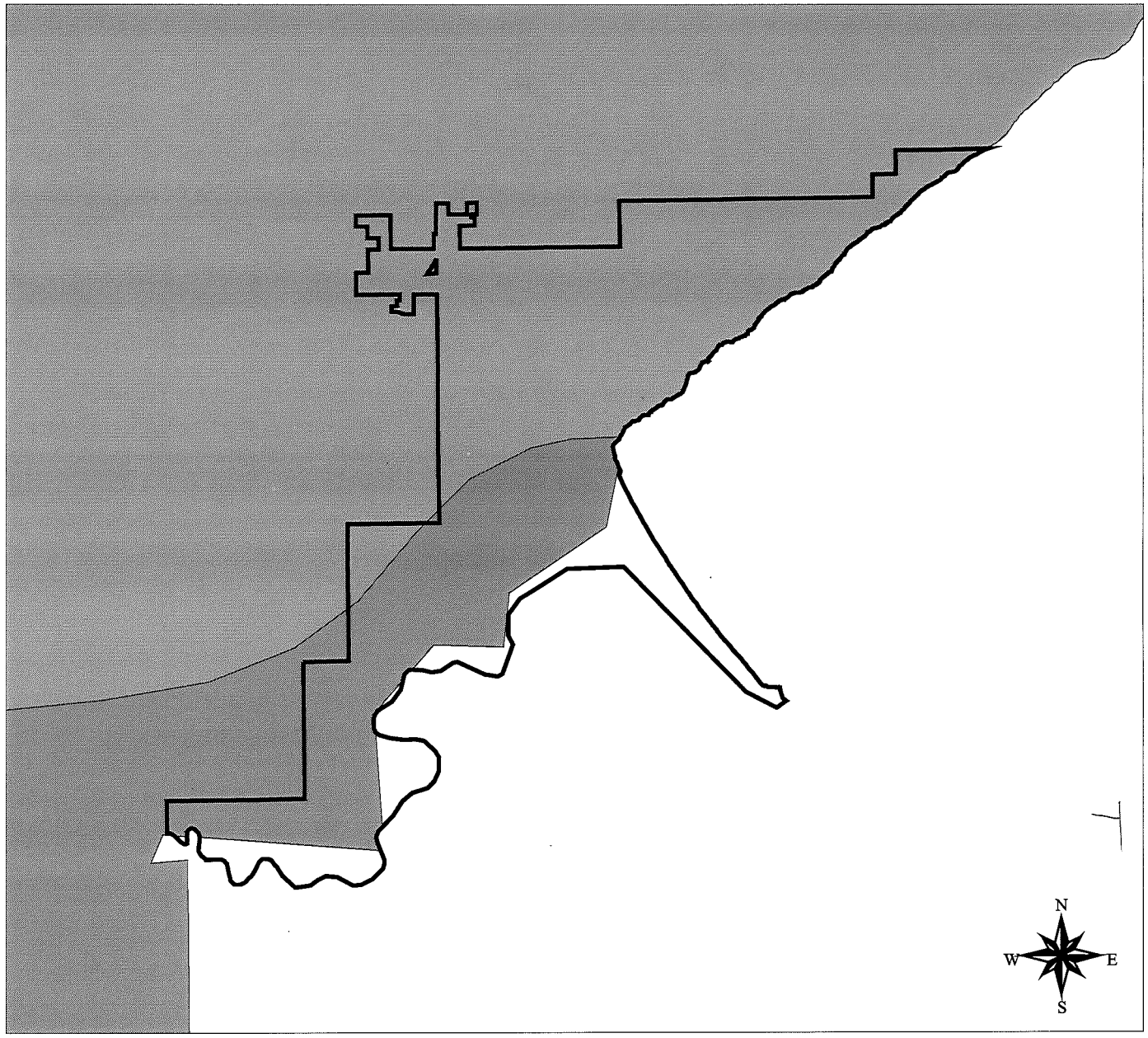
Ecological Subsections of Minnesota

Municipal Boundaries

- Duluth

Sections

- Lake Agassiz, Aspen Parklands
- Minnesota & NE Iowa Morainal
- N. Minnesota & Ontario Peatlands
- N. Minnesota Drift & Lake Plains
- North Central Glaciated Plains
- Northern Superior Uplands
- Paleozoic Plateau
- Red River Valley
- Southern Superior Upland
- Western Superior Upland



- Lite Metadata - - Get Data - - View Attribute Table - - View Sample -

Minnesota DNR - Division of Forestry

Ecological Subsections of Minnesota

This page last update: 02/10/2000 3:08:25 PM
metadata created using Minnesota Geographic Metadata Guidelines .

Go to Section:

Section 1	*Identification Information - - - - - - top*
Originator	Minnesota DNR - Division of Forestry
Title	Ecological Subsections of Minnesota
System Name	ecssbne2
Abstract	This coverage provides information related to Ecosystem delineation in Minnesota. The boundaries of the polygons of this coverage were derived from Land Type Association (LTA) delineations that were compiled from a visual/interpretive process using Topography, Wetlands, Surficial Geology, Soils, Landsat Imagery and Climatic conditions. This coverage replaces the ECSSBPY2 coverage which was delineated using coarser techniques and data.
Purpose	This dataset can be used for a variety of planning activities and education.
Time Period of Content Date	1999
Currentness Reference	The ECS polygons were delineated during part of the process of identifying Land Type Associations in 1997-1998 and are a refinement of the original ECS
Progress	Complete
Maintenance and Update Frequency	None Planned
Spatial Extent of Data	Statewide-Minnesota
Bounding Coordinates	E = -89 W = -97.5 N = 49.5 S = 43
Place Keywords	Minnesota

Theme Keywords	Province, Section, SubSection
Theme Keyword Thesaurus	
Access Constraints	None
Use Constraints	None
Contact Person Information	Tim Loesch, GIS Application Coordinator DNR-MIS 500 Lafayette Road St. Paul, MN 55155-4011 Phone: (651) 296-0654 FAX: (651) 297-4946 E-mail: tim.loesch@dnr.state.mn.us
Browse Graphic File Name	ecssbne2_sam.gif
Browse Graphic File Description	
Associated Data Sets	Land Type Associations, Geomorphology of Minnesota

Section 2	*Data Quality Information - - - - - - top*
Attribute Accuracy	Unknown. Automated tests were conducted on all data to ensure that no invalid codes exist within the data set
Logical Consistency	Data are topolocially correct using ARC/INFO 7.1.2. All polygons are closed and lines intersect where intended. Region feature classes were created for the three levels of ECS classes, Province, Section and Subsection.
Completeness	All ECS boundaries in the state were re-located based on the definition of the Land Type Association boundaries, the fourth step in the ECS classification process. Significant differences exist between the older version of the ECS data.
Horizontal Positional Accuracy	Unknown
Vertical Positional Accuracy	Not Applicable
Lineage	This data set was produced as a derivitive of the Land Type Association (LTA) delineation process. LTA's were delineated by manually interpreting a variety of land surface information including topography, wetland distributions, soil characteristics, Hydrography, presettlement vegetation, bedrock type, Landsat satellite imagery, geomorphology and local knowledge of the landscape from individuals on each landscape team. The interrelationship of features were examined by overlaying thematic maps and observing coincident patterns. This was largely a visual interpretive process. LTA's boundaries were delineated on mylar printouts of the Geomorphology of Minnesota data based on USGS 1:100,000 scale tiles. These mylars were then used as a basis for the capturing the LTA boundaries in digital format. Where possible, LTA boundaries were matched with existing coverage delineations-particularly from the Geomorphology of Minnesota dataset. In other locations, boundaries that could not be captured from other sources were hand digitized from the mylar base-maps. Once the LTA

	coverage was complete, each polygon was assigned a ECS code based on the National Hierarchical Framework of Ecological Units standards. This coverage was then used as a basis for creating the Regions coverage of the three top levels of the ECS classification system found in this cover.
Source Scale Denominator	100000

Section 3	*Spatial Data Organization Information - - - - - - top*
Native Data Set Environment	Arc/Info 7.1.1
Geographic Reference for Tabular Data	
Spatial Object Type	Vector
Vendor Specific Object Types	Poly, Arc
Tiling Scheme	State

Section 4	*Spatial Reference Information - - - - - - top*
Horizontal Coordinate Scheme	UTM
Ellipsoid	GRS1980
Horizontal Datum	NAD83
Horizontal Units	meters
Distance Resolution	meters
Altitude Datum	n/a
Altitude Units	n/a
Depth Datum	n/a
Depth Units	n/a
Cell Width	0
Cell Height	0
Latitude Resolution	0
Longitude Resolution	0
UTM Zone Number	15
SPCS Zone Identifier	0
County Coordinate Zone Identifier	0
Coordinate Offsets or Adjustments	n/a

Map Projection Name	n/a
Map Projection Parameters	n/a
Other Coordinate System's Definition	n/a

Section 5 *Entity and Attribute Information* - - - - - - top

Entity and Attribute Overview	
Entity and Attribute Detailed Citation	Ecological Subsections of Minnesota ECSSBNE2.PAT
HTML Table	PROVNAME - 25 - 40,40,C - - The ECS Province Name ECS_PROV - 65 - 3,3,I - - National Hierarchical Framework of Ecological Units identifier SECNAME - 68 - 40,40,C - - The ECS Section name ECS_SEC - 108 - 3,3,I - - National Hierarchical Framework of Ecological Units identifier SUBSECNAME - 112 - 40,40,C - - The ECS Subsection Name ECS_SUBSEC - 152 - 3,3,I - - National Hierarchical Framework of Ecological Units identifier Version - 157 - 4,4,C - - ECS Version (Year and Version)

Section 6 *Distribution Information* - - - - - - top

Publisher	Minnesota DNR - MIS Bureau
Publication Date	6/1/1999
Contact Person Information	Robert Maki, GIS Database Coordinator Minnesota DNR 500 Lafayette Road, Box 11 St. Paul, MN 55155 Phone: (651) 297-2329 FAX: (651) 297-4946 E-mail: robert.maki@dnr.state.mn.us
Distributor's Data Set Identifier	ecssbne2
Distribution Liability	None stated
Transfer Format Name	7.1.2
Transfer Format Version Number	ARC/INFO
Transfer Size	0
Ordering Instructions	Contact above Person
Online Linkage	DNR Data Deli

Section 7	*Metadata Reference Information - - - - - - top*
Metadata Date	7/7/1999
Contact Person Information	Tim Loesch, GIS Applications Programmer Minnesota DNR - MIS Bureau 500 Lafayette Road St. Paul, MN 55155 Phone: 651-296-0654 FAX: 651-297-4946 E-mail: tim.loesch@dnr.state.mn.us
Metadata Standard Name	Minnesota Geographic Metadata Guidelines
Metadata Standard Version	1.1
Metadata Standard Online Linkage	http://www.lmic.state.mn.us/gc/stds/metadata.htm

Ecological Subsections of Minnesota

Table Name	Field Name	Begin Column	Definition	Valid Values	Description
ECSSBNE2.PAT					
	PROVNAME	25	40,40,C		The ECS Province Name
				Laurentian Mixed Forest Province	
				Eastern Broadleaf Forest Province	
				Tallgrass Aspen Parklands Province	
				Prairie Parkland Province	
	ECS_PROV	65	3,3,I		National Hierarchical Framework of Ecological Units identifier
				212	
				222	
				223	
				251	
	SECNAME	68	40,40,C		The ECS Section name
				Lake Agassiz, Aspen Parklands	
				Minnesota	NE Iowa Morainal
				N. Minnesota	Ontario Peatlands
				N. Minnesota Drift	Lake Plains
				North Central Glaciated Plains	
				Northern Superior Uplands	
				Paleozoic Plateau	
				Red River Valley	
				Southern Superior Uplands	
				Western Superior Uplands	
	ECS_SEC	108	3,3,I		National Hierarchical Framework of Ecological Units identifier

			223N	
			222M	
			212M	
			212N	
			251B	
			212L	
			222L	
			251A	
			212J	
			212K	
SUBSECNAME	112	40,40,C		The ECS Subsection Name
			Glacial Lake Superior Plain	
			Mille Lacs Uplands	
			Border Lakes	
			North Shore Highlands	
			Nashwauk Uplands	
			Laurentian Highlands	
			Littlefork Vermilion Uplands	
			Agassiz Lowlands	
			Chippewa Plains	
			St. Louis Moraines	
			Pine Moraines and Outwash Plains	
			Tamarack Lowlands	
			The Blufflands	
			Rochester Plateau	
			Hardwood Hills	
			Big Woods	
			Anoka Sand Plain	
			St. Croix Moraine	
			St. Paul-Baldwin Plains and Moraines	
			Oak Savannah	
			Aspen Parklands	
			Red River Prairie	
			Minnesota River Prairie	

			Coteau Moraines	
			Inner Coteau	
ECS_SUBSEC	152	3,3,I		National Hierarchical Framework of Ecological Units identifier
			212Ja	
			212Jd	
			212Kb	
			212La	
			212Lb	
			212Lc	
			212Le	
			212Ma	
			212Mb	
			212Na	
			212Nb	
			212Nc	
			212Nd	
			222Lc	
			222Lf	
			222Ma	
			222Mb	
			222Mc	
			222Md	
			222Me	
			223Na	
			251Aa	
			251Ba	
			251Bb	
			251Bc	
Version	157	4,4,C		ECS Version (Year and Version)
			99a	

DISTRIBUTION AND RELATIONSHIPS OF HABITATS AND BIRDS IN THE ST. LOUIS RIVER ESTUARY — MINNESOTA AND WISCONSIN

PREPARED BY

GERALD J. NIEMI
THOMAS E. DAVIS
PERSHING B. HOFSLUND

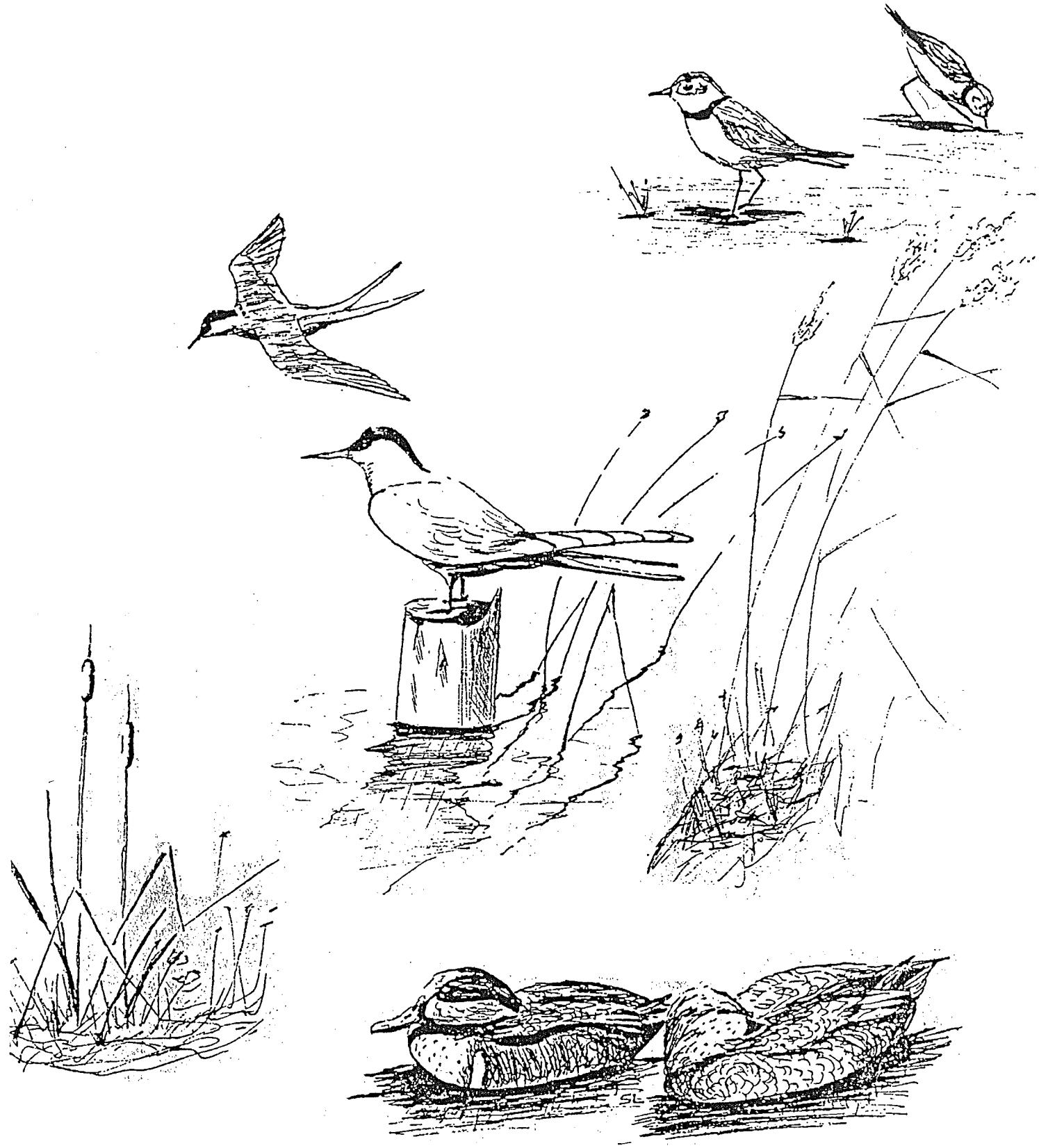
DEPARTMENT OF BIOLOGY
LAKE SUPERIOR BASIN STUDIES CENTER
UNIVERSITY OF MINNESOTA, DULUTH

JULY, 1979

FOR

UNITED STATES DEPARTMENT OF THE INTERIOR
FISH AND WILDLIFE SERVICE
ST. PAUL FIELD OFFICE, ECOLOGICAL SERVICES
538 FEDERAL BUILDING AND U. S. COURTHOUSE
316 NORTH ROBERT STREET
ST. PAUL, MINNESOTA 55101

DISTRIBUTION AND RELATIONSHIPS OF HABITATS AND BIRDS IN THE ST. LOUIS RIVER ESTUARY



DEPARTMENT OF BIOLOGY - LAKE SUPERIOR BASIN STUDIES CENTER

UNIVERSITY OF MINNESOTA, DULUTH, MINNESOTA 55812

ST. LOUIS RIVER ESTUARY

Figure 6. Selected marsh census areas and bird colony locations in the St. Louis River estuary. Colony numbers correspond to Table 5 and marsh letters correspond to Table 7.

ST. LOUIS RIVER ESTUARY

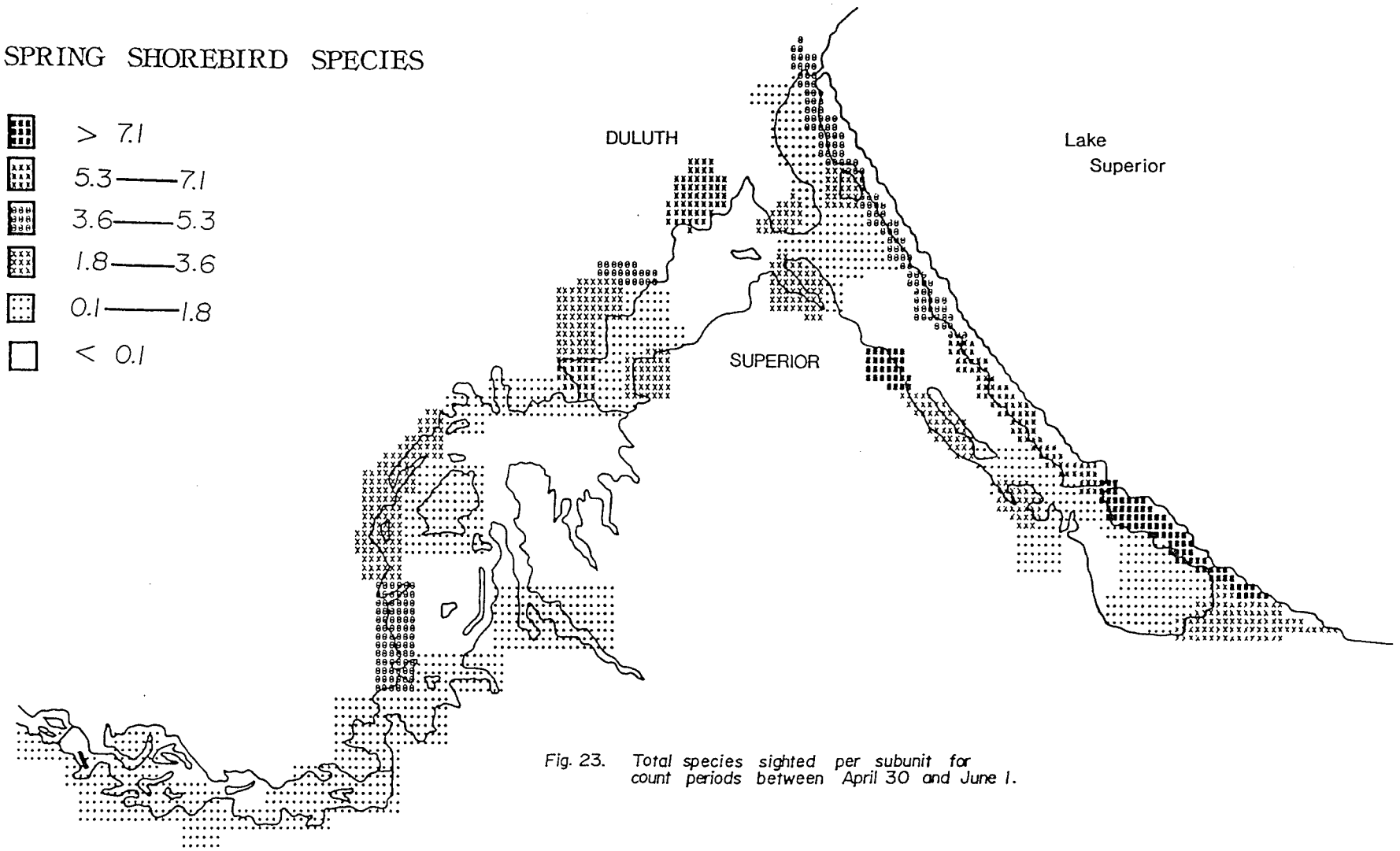


Fig. 23. Total species sighted per subunit for count periods between April 30 and June 1.

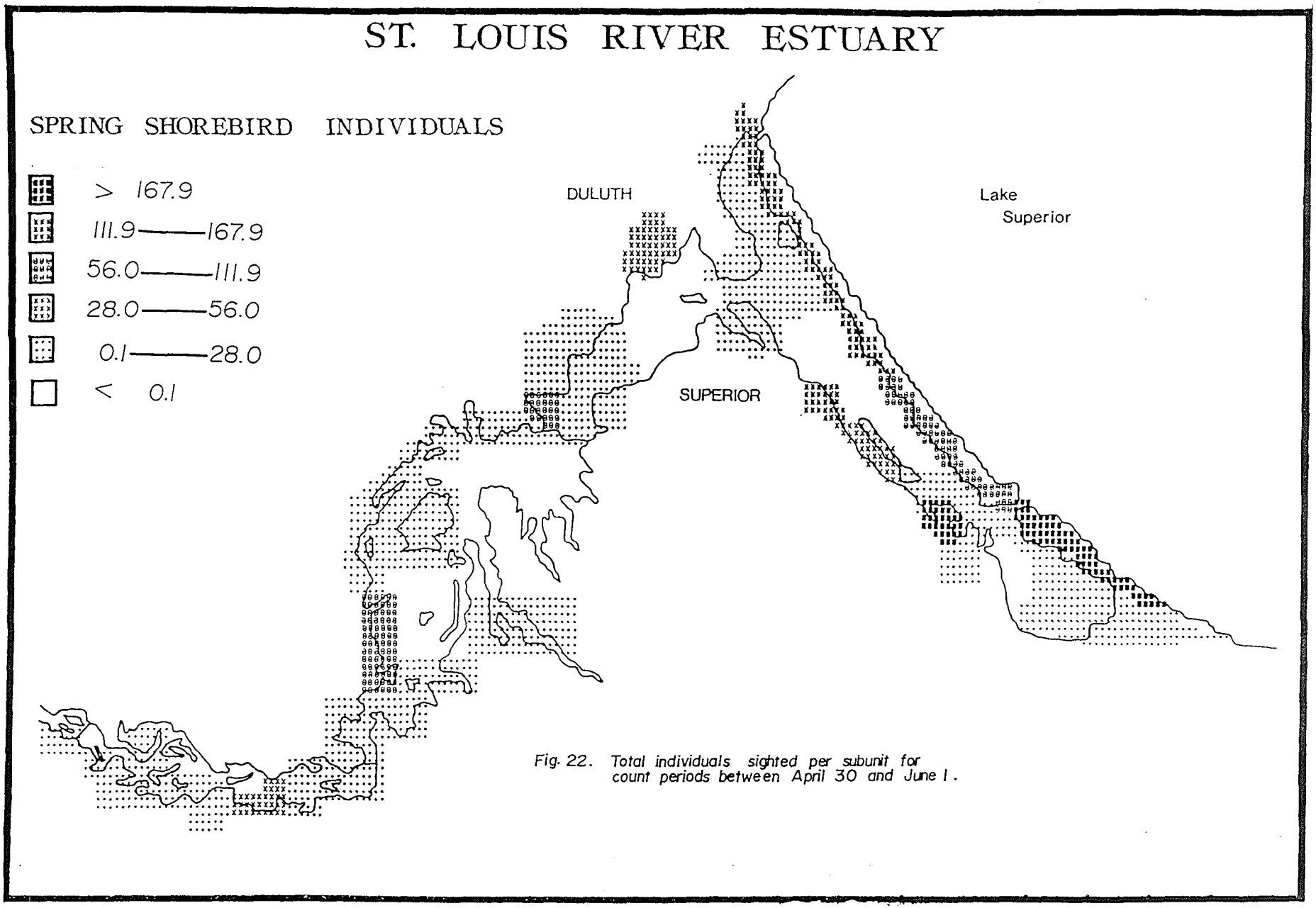


Fig. 22. Total individuals sighted per subunit for count periods between April 30 and June 1.

W

Table 2. Upland areas sampled during June and July 1999 in the St. Louis River system (Figure 1).

	Allouez Bay #1		Nemadji River #2		Bong Bridge #3		Dwights Pt. & Badger Rd #4		McClures Landing #5		Chases Point #6		Oliver #8		Mont du Lac #9		Fond du Lac #11		Total	Total +
Mallard			2	1+		1+		1+				1+							2	4+
Mourning Dove							1	3+	1	2+									2	5+
Pileated Woodpecker										1+			1						1	1+
Great Crested Flycatcher							1	3+				1+					1		2	4+
Alder Flycatcher	1		1		1						1								4	
Least Flycatcher			1		3		2	2+		2+	3		5	1+		2+	1		15	7+
Eastern Wood Pewee					1		2		4		3						1		11	
Common Crow		1+		3+	1	3+		4+		1+		9+		10+		3+		7+	1	41+
Black-capped Chickadee					3		1	2+	1	2+	1	3+	1	1+		1+	3	1+	10	10+
White-breasted Nuthatch						1+	1			1+		2+		2+		1+		3+	1	10+
Red-breasted Nuthatch						1+		1+	1	1+									1	3+
Brown Creeper							5												5	
House Wren			2				1	1+											3	1+
Winter Wren													3	2+	2	2+			5	4+
Marsh Wren							1												1	
Sedge Wren	2		2																4	
Gray Catbird			1	1+	3	1+	1				1	1+			1				7	3+
American Robin	1		2	1+	3		4	7+	5	1+		2+	4	3+	2		1	1+	22	15+
)od Thrush									1				1						2	
Hermit Thrush													2	1+			1	2+	3	3+
Veery		1+		1+	5		6	3+	1	2+	13	4+	7	2+	4	1+	6	2+	42	16+
Golden-crowned Kinglet					2		1												3	
Cedar Waxwing				2+	1	1+	3	6+	1	1+		3+		2+				3+	5	18+
European Starling			11																11	
Red-eyed Vireo	1		2		6		18		8		32		19		11	1+	14		111	1+
Warbling Vireo			1	1+	2														3	1+
Black-and-white Warbler	1						4		1		4						2		12	
Nashville Warbler							3	2+	1		5	1+	1				2		12	3+
Yellow Warbler			12		20		2				1				2				37	
Magnolia Warbler							1												1	
Yellow-rumped Warbler					1		2		5				1		1		1		11	
Black-throated Green Warbler					1		6		1	1+	2				1	1+	1		12	2+
Blackburnian Warbler					1		1												2	
Chestnut-sided Warbler			2		2		2	1+			8	1+	1				5		20	2+
Ovenbird	2				4		6		5		8		15		8	1+	9		57	1+
Mourning Warbler							3		2		4		2				3		14	
Common Yellowthroat	6		5		7		17	1+	4		28		7	1+	4		2		80	2+
American Redstart	2		1		2		5		1		10		19		1		9		50	
Red-winged Blackbird			6	1+	5	1+		1+			1	1+		1+					12	5+
Baltimore Oriole											1								1	
Common Grackle				3+				1+						1+				2+		7+
Brown-headed Cowbird			1		4														5	
Rose-breasted Grosbeak							1	1+	1		2		1						5	1+
Purple Finch							1												1	
American Goldfinch			3			2+		2+		1+		2+		1+				4+	3	12+
Vesper Sparrow							1												1	
Chipping Sparrow			1		2						2						1		6	
Clay-colored Sparrow					6		1												7	
White-throated Sparrow	2				3		24		7		19		6	1+		2+	1	1+	62	4+
Swamp Sparrow	3		6				2						1		1				13	

ıpled during June and July 1999 in the St. Louis River system (Figure 1).

SE Allouez Bay #2	Southern Allouez Bay #3	Nemadji River #5	So. Hog Island #6	40th Avenue West #8	Grassy Point #9	Hallet Dock #10	Dwights Point #11	NE Indian Point #12	Indian Point Island #13
		+							
+		+							
	2	1		2				1	
						2	2	3	
				4	1		1		1
						2			
		3	1	2		4			
	1		+				1		
								+	
							+	+	
			+	2		2		1	
+	1	2	1	1	2	1	1	2	2
+	1	2	1	1	1	1	1	2	2
1	2	1	+	1	2	1	3	3	+
	+					+		+	7
			+	+				+	1
3	3	2	3	1	2	1	1	1	4
+	1	+	+	3	2	2	1	1	1

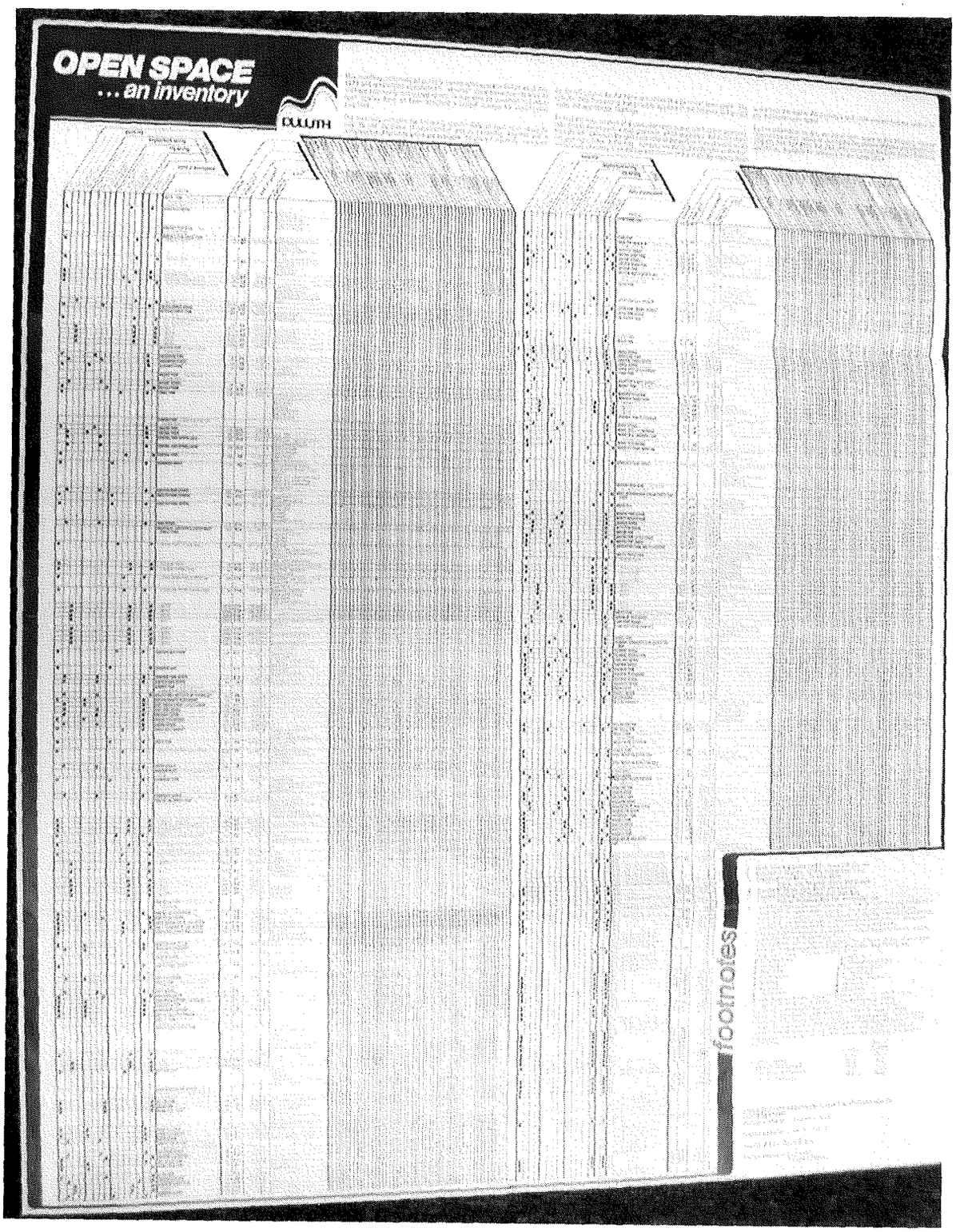
Pokegama Bay #14	Pokegama Bay #15	No Clough Island #16	No Tallas Island #17	So Tallas Island #18	Smithville Island #19	SW Clough Island #20	Morgan Park Mudflats #22	Kilchliss Meadow #23	Spirit Lake Point #24
1									
			1						
		1							
			+	1					
				+			2		
	2								
	3								
				3					
	+								3
			+				1		
+	+		+	+	1				
		+		+	+	+			+
1	+	1	+	2	1	+	2	1	
	+							+	
1	+	1	+	1	2	1	1	1	2
+				2				1	
2	+	3	1	1		3	4		2
+		+		+					
			1	2					
3	1	1			2	3	3		1
1		+	2	+	1		1	1	+
							2	2	

E South Spirit Lake #27	North Mud Lake #28	South Spirit Lake #29	South Mud Lake #30	So. Oliver Bridge #31	Bear Is. #32	Radio Station #33	Boy Scout Landing Marsh #34	Overlook Marsh #35
1	2							
1								
				+				
	1		1				2	
								4
							1	
					2	4		
3	2	3		2				
	1		1	2			2	
			1		+	1		
					+	+		
	+		1		+			1
						2		
	1		2		2	2	1	2
					+			
4	1	1		1	2	1	3	1
	+		1					1
3	4	1	2		2	1	2	2
			+					
4	1		4	3	2	3	2	3
	+	5	1	2	1	2		2

South Horseshoe Island #36	North Horseshoe Islaind #37	No Name Marsh #38	Fond du Lac Marsh #39	East South Spirit Lake #40	North Oliver Bridge #41	Total
						1
						4
						1
						1
					+	2
						12
7			2			20
						11
						2
			3			16
						6
				3		16
			1		1	10
						3
						1
+	+	+				2
						7
+			1		1	33
		+				1
		1	+			3
2		2	1	+	2	47
1		1				7
3	3	1	1		+	63
					+	7
						4
2	1	2	2	2	3	74
2	+	1	3		1	39
	2	1				7

1973 open space map

back side '73 open space map



complete list of facilities which are available. Tc   e the inventory

City	State	School District	City-State	playground/playfield (active)	park (passive)	school recreation area	undeveloped area	large city park (general purpose)	parkway	special use area	forest park	other open space	developed	undeveloped	name	number	map grid	size (in acres)b	planning areac	
															AMITY PARK, *Snively Blvd. — See Colbyville, Lakeview & Lester River Forest Park*					
●										●			●		**ARENA AUDITORIUM**	81	H11	17.50	9	Bayfront location Aerial Bridge & harbor activity viewpoint Tourist boat access Regional sports arena & auditorium facilities
															BARDON'S PEAK BLVD. — *See Skyline Pkwy.*					
															BARDON'S PEAK FOREST PARK	14	N3	2,775.50	2	Unique hardwood climax forest
●											●			●	*(Magney Park)*	(a)	M4	(1,000.00)	2	Skyline Parkway Good rock hunting Headwaters of Sargents Creek Ely Peak Bardon's Peak scenic overlook
●											●			●	*(Snively Park)*	(b)	M4	(631.00)	2	Unique hardwood climax forest Stewart Creek Skyline Parkway Sargents Creek
●											●		●		*(Gasser Park)*	(c)	M4	(2.08)	2	
●									●				●		*(Knowlton Creek Blvd.)*[d]	(d)	L5	(20.91)	2	
●										●				●	*(Spirit Mountain Recreation Area)*	(e)	N3	(1,060.00)	2	Proximity to Tourist Center Municipal Zoo linkage Prominent view of St. Louis River Potential mountain climbing area Trails
		●									●			●	*(#213)*	(213)	L6	(84.00)	2	
●						●							●		**JULIUS BARNES SCHOOL**	88	F10	0.55	6	
															BAYVIEW FOREST PARK	25	K5	298.00	2	Kingsbury Creek Knowlton Creek
●											●			●	*(Lands formerly tax forfeit & conveyed to City)*	(a)	K6	(78.00)	2	
		●									●			●	*(#217)*	(217)	K6	(90.00)	2	Knowlton Creek
		●									●			●	*(#218)*	(218)	K6	(4.00)	2	Skyline Parkway
		●									●			●	*(#219)*	(219)	K6	(117.00)	2	Skyline Parkway
		●									●			●	*(#220)*	(220)	K6	(9.00)	2	
															BELLEVUE PARK — *See Oneota Forest Park*					
●					●								●		**BIRCHWOOD PARK**	8	P4	2.99	1	Sargent's Creek Ravine
	●					●							●		**BIRCHWOOD SCHOOL**	73	F9	1.58	4	
●				●									●		**BLACKMER PARK**	16	N6	12.30	2	St. Louis River Hardwood forest
															BREWER PARK — *See Oneota Forest Park*					
	●					●							●		**BRYANT SCHOOL**	48	I9	0.53	5	
●							●							●	**BUFFALO PARK**	107	E12	3.00	7	
●									●				●		**CANAL PARK**	139	H11	2.00	9	Duluth ship canal location Aerial Bridge and harbor activity viewpoint Beach access Lighthouse Aerial Bridge rides Ship viewing Marine Museum
															CARSON PARK — *See Fond du Lac Forest Park*					
●					●								●		**CASCADE PARK**	78	G10	1.30	8	
	●			●									●		**CENTRAL FIELD**	87	F11	3.11	10	Athletic Field
	●					●							●		**CENTRAL HIGH SCHOOL (OLD)**	80	G10	0.47	8	Architecturally significant structure listed in National Register
	●					●							●		**CENTRAL HIGH SCHOOL (NEW)**	75	G10	0	4	Clarkhouse Creek Vista of cityscape
●										●				●	**CENTRAL PARK**	63	H9	31.55	5	Vista of harbor Gabbro rock outcroppings
●								●					●		**CHAMBERS GROVE**	4	P2	13.00	1	St. Louis Riverside location

Header groups: ownership (City, State, School District, City-State); USE — neighborhood serving (playground/playfield (active), park (passive), school recreation area, undeveloped area), city serving (large city park (general purpose), parkway, special use area, forest park, other open space); status of development (developed, undeveloped).

Facility columns: Bandstand/Stage; Bathhouse; Benches; Bleachers/Viewing Stand (Other, Players); Boat Launching; Camping (Day, Overnight); Clubhouse (Tennis, Golf, Community); Concession stand; Courts, Hardsurface (Shuffleboard, Tennis, Volleyball, Basketball); Drinking Water; Fields (Softball, Baseball, Football); Fireplace/Grates; Golf Course; Horseshoe Pit; Skating (Hockey, Skating); Lighting; Marina; Memorial, Marker, Monument; Parking Lot; Pull Off; Picnic Table; Playground Equipment; Pools (General, Reservable groups); Lifeguard-Swim Area (Spray, Wading, Swimming); Pre-School Play Area; Shelter (Other, Picnic, Warming); Skiing (Jumping, Cross Country, Downhill); Toilet Facilities; Trails (Non-vehicular, Vehicular); Leadership Supervision Provided (Winter, Summer, Year-round)

footnotes

1 Guide booklet available for $.50, Room 208, City Hall
2 Renamed in December 1973 to Hillside Sport Court
3 Charges: 9 holes $2.00, 18 holes $3.00
Special rates for senior citizens and students
4 Charges: $2.00 per night, $2.50 with electricity
5 Charges: Adults $1.00, Children 6-12 years $.25
Free on Thursdays, April 15th thru October 15th

a "Includes certain of the lands which are tax forfeit withheld from sale and placed in conservation for various public purposes. One such public purpose is open space. Thus, the category "Other Open Space" is comprised of tax forfeit lands withheld from sale for the following reasons: park extension; forest extension; watercourse protection; and land reserved for future school sites and TV towers."

b Acreages shown for individual properties are in some cases approximations calculated by the Department of Research and Planning.

c "Planning Areas" refer to specific geographic units of the city, fourteen of which were delineated in 1964 by the Duluth-Superior Metropolitan Area Planning and Transportation Study. They are named as follows:

#1 Gary-New Duluth	#8 Model City
#2 Morgan Park	#9 Central Business District
#3 West Duluth	#10 East Hillside-Endion
#4 Duluth Heights	#11 Congdon Park
#5 West End	#12 Lakeside-Lester Park
#6 Kenwood	#13 North Shore
#7 Chesterwood	#14 Park Point

d Acreage figure for Knowlton Creek Boulevard includes 1.70 miles of roadway.

e Acreage figure for Snively Boulevard includes 4.60 miles of roadway.

f Acreage figure for Congdon Boulevard includes 16.00 miles of roadway.

g Acreage figure for Mission Creek Boulevard includes 2.30 miles of roadway.

h Acreage figure for Skyline Parkway includes acreages for parkways formerly known as Rogers Boulevard, Bardon's Peak Boulevard and Snively Boulevard Extension. These parkways were all renamed to Skyline Parkway in 1959 by Council Ordinance. Acreages and miles of roadway for the three parkways now comprising Skyline Parkway are as follows:

	Acreage	Miles of Roadway
Rogers Boulevard	81.74	11.10
Bardon's Peak Boulevard	45.18	6.50
Snively Boulevard Extension	70.00	2.00
TOTAL Skyline Parkway	196.92	19.60

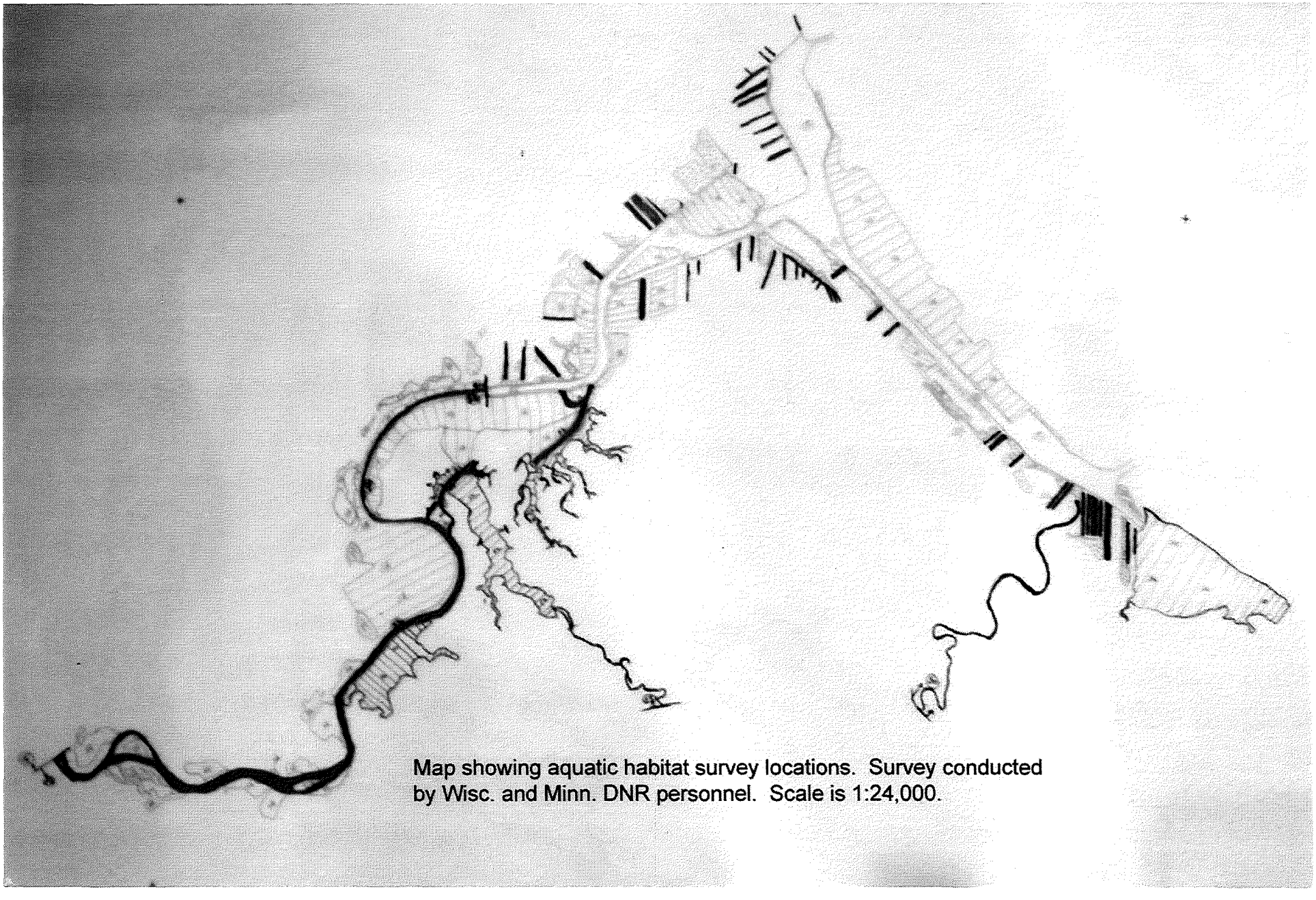
PROJECT STAFF RESPONSIBLE FOR THE PREPARATION OF THIS INVENTORY

Planner in Charge — Elizabeth A. Niemi

Graphic Designer — John R. Ulven, Jr.

Graphic Artist — Barbra E. Kobe

Student Interns — Gary Tonkin
J. Sanders Sweeney



Map showing aquatic habitat survey locations. Survey conducted by Wisc. and Minn. DNR personnel. Scale is 1:24,000.

DNR St. Louis River Estuary Fish Sampling Data

Karen:

Sorry for the delay. Very busy you know. If you have any questions, feel free to contact Dennis or myself. Send us a version/draft of the map so we can share it with the interested parties in our office and at regional headquarters. We can also check it for errors.

Later,

John Lindgren MN DNR

Dennis Pratt WT

files:

Cacrat5a.wb3
Cacrat5b.wb3
Cacrat5c.wb3
Cacrat5d.wb3
Cacrat5e.wb3
Cacrat5f.wb3
Cacrat5g.wb3
Cacrat5h.wb3
Wetltypes.wpd

Wetland type 5a: Rapids from below Nekuk Island to Fond du Lac Dam (clear)

			SPAWNING				NURSERY				ADULT			
COMMON NAME	Native ?	ABUNDANCE	SPR	SUM	FAL	WIN	SPR	SUM	FAL	WIN	SPR	SUM	FAL	WIN
Black crappie	Y	common	Y					Y				Y		
Burbot	Y	present				Y	Y			Y				Y
Channel catfish	Y	common		Y				Y	Y		Y	Y	Y	Y
Emerald shiner	Y	common						Y	Y			Y	Y	
Lake sturgeon	Y	common	Y				Y	Y	Y	Y	Y			
Longnose dace	Y	present		Y			Y	Y	Y	Y	Y	Y	Y	Y
Longnose sucker	Y	present	Y				Y				Y			
Muskellunge	Y	present	Y					Y	Y		Y	Y	Y	
Northern Pike	Y	common	Y					Y	Y		Y	Y	Y	
Rockbass	Y	common		Y			Y	Y	Y	Y	Y	Y	Y	Y
Shorthead redhorse	Y	common	Y					Y	Y		Y	Y	Y	
Silver lamprey	Y	trace						Y	Y					
Silver redhorse	Y	common	Y									Y	Y	
Slimy sculpin	Y	present		Y				Y	Y	Y	Y	Y	Y	Y
Smallmouth bass	Y	common	Y	Y			Y	Y	Y	Y	Y	Y	Y	Y
Spottail shiner	Y	common						Y	Y			Y	Y	
Stonecat	Y	present		Y				Y	Y		Y	Y	Y	Y
Trout perch	Y	common										Y	Y	
Walleye	Y	common	Y				Y	Y	Y	Y	Y	Y	Y	Y
White sucker	Y	common	Y				Y	Y	Y	Y	Y	Y	Y	Y
Yellow perch	Y	common	Y					Y	Y		Y	Y	Y	Y
American eel	N	trace					Y	Y	Y					
Eurasian ruffe	N	common	Y				Y	Y	Y	Y	Y	Y	Y	Y
Freshwater drum	N	present						Y						
Rainbow smelt	N	present	Y								Y			
Sea lamprey	N	present	Y	Y							Y	Y		

Wetland Type 5c: Active dredged channel from Stryker Bay to Superior Entry (red outline)

COMMON NAME	Native ?	ABUNDANCE	SPAWNING				NURSERY				ADULT			
			SPR	SUM	FAL	WIN	SPR	SUM	FAL	WIN	SPR	SUM	FAL	WIN
Black bullhead	Y	present					Y	Y	Y	Y	Y	Y	Y	Y
Black crappie	Y	common					Y	Y	Y	Y	Y	Y	Y	Y
Burbot	Y	present					Y	Y	Y	Y	Y			Y
Channel catfish	Y	common					Y	Y	Y	Y	Y	Y	Y	Y
Emerald shiner	Y	common					Y	Y	Y	Y	Y	Y	Y	Y
Johnny darter	Y	common					Y	Y	Y	Y	Y	Y	Y	Y
Lake herring	Y	trace									Y			
Lake sturgeon	Y	common					Y	Y	Y	Y	Y	Y	Y	Y
Lake trout	Y	trace									Y			
Lake whitefish	Y	trace									Y			
Logperch	Y	common					Y	Y	Y	Y	Y	Y	Y	Y
Longnose sucker	Y	present					Y				Y	Y		
Muskellunge	Y	present					Y	Y	Y	Y	Y	Y	Y	Y
Ninespine stickleback	Y	trace									Y			
Northern Pike	Y	common					Y	Y	Y	Y	Y	Y	Y	Y
Round whitefish	Y	trace									Y			
Shorthead redhorse	Y	common					Y	Y	Y	Y	Y	Y	Y	Y
Silver redhorse	Y	common					Y	Y	Y	Y	Y	Y	Y	Y
Slimy sculpin	Y	present					Y	Y	Y	Y	Y	Y	Y	Y
Spoonhead sculpin	Y	trace					Y	Y	Y	Y	Y	Y	Y	Y
Spottail shiner	Y	common					Y	Y	Y	Y	Y	Y	Y	Y
Tadpole madtom	Y	present					Y	Y	Y	Y	Y	Y	Y	Y
Trout perch	Y	common					Y	Y	Y	Y	Y	Y	Y	Y
Walleye	Y	common					Y	Y	Y	Y	Y	Y	Y	Y
White sucker	Y	common					Y	Y	Y	Y	Y	Y	Y	Y
Yellow bullhead	Y	trace					Y	Y	Y	Y	Y	Y	Y	Y
Yellow perch	Y	common					Y	Y	Y	Y	Y	Y	Y	Y
Atlantic salmon	N	trace									Y			
Chinook salmon	N	trace									Y			
Coho salmon	N	trace									Y			
Eurasian ruffe	N	common					Y	Y	Y	Y	Y	Y	Y	Y
Pink salmon	N	trace									Y			
Rainbow smelt	N	present					Y	Y	Y	Y	Y			
Rainbow trout	N	trace									Y			
Round goby	N	present					Y	Y	Y	Y	Y	Y	Y	Y
Sea lamprey	N	present									Y			
White perch	N	present					Y	Y	Y	Y	Y	Y	Y	Y